

## **In vivo CARS imaging of human skin with a high degree of flexibility**

**Martin Weinigel, Hans Georg Breunig, Karsten König**  
**JenLab GmbH, Schillerstr. 1, 07745 Jena, Germany**  
**Email: [weinigel@jenlab.de](mailto:weinigel@jenlab.de)**

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Access to multiple endogenous tissue markers is one of the keys for label-free biomedical imaging. Nonlinear optical imaging on the basis of femtosecond laser technology is a highly capable approach to resolve the distribution of these tissue markers in human skin in vivo. Here we present a compact imaging system (MPT-CARS*compact*) with an exceptional degree of flexibility and on top of that with a multitude of nonlinear optical contrast mechanisms such as time-resolved two-photon excited (auto)fluorescence (2P-AF/FLIM), second-harmonic-generation (SHG) and coherent anti-Stokes Raman scattering (CARS). Label-free deep-tissue imaging [1-4] on the microscopic scale is presented on murine tissue samples and human skin in vivo. Various applications can be triggered by this approach, e.g. in vivo imaging of human skin for dermatological and cosmetic investigations or rapid ex-vivo biopsy examination during surgery and small animal research.

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### References:

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